10

15

International pat.appln. No. PCT/NL95/00336 Enclosure to letter dated 31 October 1996

NEW CLAIMS

1. An artificial blood vessel inner layer, made from synthetic material, such as an artificial tynica intima or the like for replacing a section of blood vessel inner layer previously removed from a plood vessel 5 and/or for covering a predetermined length of damaged blood vessel inner layer, comprising diameter arranging means for increasing and/or decreasing the diameter of the artificial blood vessel inner layer,

characterized in that said artificial blood vessel layer in turn comprises one or more end sections folded back over the outer surface thereof to lie unjoined therealong, in which fold(s) the diameter

arranging means are disposed.

2. An artificial bytood yessel inner layer according to claim 1 where in the diameter arranging means comprise a length of memory metal proprogrammed to expand and/or contract at a det/ermined/temperature.

3. An artificial blood vessel inner layer 20 according to claim 1/wherein the diameter arranging means comprise an expandable gauze.

4. A blood vessel treating assembly,

comprising:

- an artificial blood vessel inner layer Claim / 25 according to any of the claims 1-3 and,

introducing means for introducing the artificial blood vessel inner layer into a blood vessel.

5/ An assembly according to claim 6, further

comprising/at least one sheath-like protective cover.

6. An assembly according to claim wherein the introducing means comprise at least one

L 30

AMENDED SHEET

25

35

catheter-like element associated with the artificial blood vessel inner layer.

7. An assembly according to any of the claims

4-6 further comprising widening means for widening out of
the blood vessel in order to facilitate introduction of
the blood vessel treating assembly therein.

8. An assembly according to any of the claims blocking off the passage of blood into the assembly during introduction of the assembly into the blood vessel.

9. A blood vessel treating assembly according to any of the claims 4-8 further comprising pressure exerting means for exerting pressure onto the artificial blood vessel inner layer, when the latter is in position within the blood vessel.

10. A blood vessel treating assembly according to claim 9 wherein the blood vessel widening means, the bunging means and the pressure exerting means comprise a cone-shaped element associated with the front of the introducing means.

11. Introducing means for introducing an artificial blood vessel inner layer according to any of the claims 1-10 into a blood vessel, comprising:

a catheter/-like element,

- widening means for widening out of the blood vessel in order to facilitate introduction of the artificial blood vessel inner layer therein,

- bunging means for substantially blocking off
30 the passage of blood during introduction of the
artificial blood/vessel inner layer,

- pressure exerting means for exerting pressure onto the artificial blood vessel inner layer, when the latter is in position within the blood vessel,

characterized in that the widening, bunging and pressure exerting means have substantially the same diameter as the internal diameter of the blood vessel into which the artificial blood vessel is introduceable.

Oil Ownerd

12. Introducing means according to claim 11 wherein the blood vessel widening means, the bunging means and the pressure exerting means comprise a coneshaped element associated with a distal end of thereof.

13. A method of replacing a previously removed inner layer of a blood vessel and/or for covering a predetermined length of damaged blood vessel inner layer comprising the steps of inserting a blood vessel treating assembly according to claims 11, via an incision, upto a predetermined distance into a blood vessel, removing the protective sheath from around the assembly whereafter the artificial blood vessel inner layer is expanded against the blood vessel walls, the catheter-like element then being removed from the blood vessel, the cone-like element further forcing the artificial blood vessel inner layer into position as it does so, and joining the end of the artificial blood vessel inner layer to the existing blood vessel near the incision.

Cold et